Module 9
Antemortem Inspection

Objectives

Upon completion of the antemortem inspection module the trainee will be able to:

1. Describe the following:

    a. Regular antemortem inspection
    b. Delayed slaughter antemortem inspection
    c. Alternative antemortem inspection procedure
    d. U.S. Suspect
    e. Handled as a U.S. Suspect
    f. Downer
    g. Tuberculosis reactor
    h. Brucellosis reactor
    i. The reasons for antemortem inspection

2. Describe the actions the food inspector and/or the veterinarian should take when the following livestock are found on antemortem.

    a. Animals that have been used in special drug tests or investigation
    b. Animals that were exposed to drugs, heavy metals, insecticides, or pesticides
    c. Animals affected with recent fractures, bruises, or injuries
    d. Animals with reportable or foreign animal disease

3. Identify the establishment's responsibilities for:

    a. livestock pens.
    b. U.S. Suspect pen.
    c. floors in livestock pens.
    d. restraining devices.
    e. assistance for antemortem inspection.

4. Identify the person who must approve:

    a. delayed slaughter antemortem inspection.
    b. the slaughter of animals used in research programs.
    c. modification of antemortem animal identification procedures.

5. Identify the equipment and supplies that are needed to perform antemortem inspection.

6. Complete, given a list of information, the following:

   a. A pen card
   b. FSIS Form 6150-1
   c. FSIS Form 6200-16 (formerly MP Form 402-1)

7. Define the following:

   a. Barrow
   b. Boar
   c. Bull
   d. Calf
   e. Cow
   f. Ewe
   g. Heifer
   h. Lamb
   i. Ram
   j. Shoat
   k. Stag
   l. Steer
   m. Wether

8. List five examples of:

   a. abnormal respiration
   b. abnormal behavior
   c. abnormal posture
   d. abnormal discharges
   e. abnormal color
   f. abnormal swellings

9. Describe the action required when the following livestock are found on antemortem:

   a. A TB reactor is found dead on antemortem inspection.

   b. A TB reactor is condemned on antemortem inspection.

   c. A brucellosis reactor is found dead on antemortem inspection.

   d. A brucellosis reactor is condemned on antemortem inspection.

   e. A brucellosis reactor goat is presented for antemortem inspection.

10. From a list of possible dispositions, select those that the veterinarian might make if he/she encountered:

    a. An animal with an elevated temperature.

    b. An animal tagged with a U.S. Suspect tag.

    c. An animal tagged with a U.S. Condemned tag.

11. Given a list describing methods used to dispose of a carcass condemned on antemortem, select those methods that are approved by FSIS.

12. From a list of abnormal conditions, select those that require the animal's temperature be taken.

13. From a list of requirements, select those that must be met when:

    a. The plant wishes to use insecticides in the antemortem pens.

    b. The plant wishes to wash cattle prior to slaughter.

    c. TB reactors are presented for slaughter.

    d. The plant injects animals with an approved proteolytic enzyme.

    e. The plant wants to dispose of an animal condemned on antemortem.

    f. Determining the time of day U.S. suspects will be slaughtered.

Module 9
Antemortem Inspection

The term antemortem means “before death”. Antemortem inspection is the inspection of live animals prior to being slaughtered. All animals presented for slaughter by the establishment to which you are assigned must receive antemortem inspection. This inspection is performed by an FSIS employee-either a veterinarian or a food inspector under veterinary supervision.

The purpose of antemortem inspection is to accept only those animals that are healthful, safe from harmful chemical and drug residues, and capable of being converted into wholesome product for the consumer. Inspection of live animals is a screening process to remove obviously diseased animals from the food supply prior to slaughter and to identify animals that require a more extensive postmortem examination by an FSIS veterinarian. It is the first line of defense in protecting the public from potentially harmful meat products. If you identify an animal with abnormal signs while performing antemortem inspection, it must be withheld from normal slaughter and segregated for closer examination by the veterinarian.

Part 309 of the regulations states that "All livestock offered for slaughter in an official establishment shall be examined and inspected on the day of, and before, slaughter". A few small-volume plants are allowed exceptions to this rule, which will be discussed later. Part 309 goes on to say, "Such antemortem inspection shall be made in pens on the premises of the establishment at which the livestock are offered for slaughter". If the official establishment serves a dual purpose, such as a public stockyard or sale barn, as well as a slaughter facility, separate pens must be designated for animals presented for antemortem inspection and those destined for resale. You would only inspect those intended for antemortem.

To prepare for antemortem inspection you must first determine if you have the equipment and supplies necessary to perform the inspection. You should have access to a thermometer, suspect and condemn tags, tagging pliers and hog rings, and a pencil to write with. You may also want to have a pad of paper and a clipboard for taking notes. Many inspectors keep all of these items together in a kit that they keep under lock and key in the antemortem area or in the government office. Some of the items you will be commonly using are:

1. A thermometer-This is supplied by the plant management. If you do not have one, or if the one you have is broken, request one from plant management.

2. Tagging Pliers-The tagging pliers, commonly called "hog ringers"; the hog rings are used to attach the suspect and condemn tags to the animal's ear.

3. Antemortem Card-FSIS Form 6150-1 (Identification Tag-Antemortem) is used to identify suspect and condemned animals.
4. FSIS Form 6502-1 (U. S. Reject/Retain Tag) is attached to pieces of equipment or to areas such as livestock pens to show that they are rejected for use because they didn't meet FSIS requirements and therefore did not pass inspection.

Prior to performing antemortem inspection, you must also determine if the plant has met its responsibilities. There are sanitary requirements for the antemortem area that the plant must meet. Drive alleys must be kept reasonably clean to avoid accumulation, to prevent odors from developing, and to avoid harboring insects and rodents. The knocking box, restraining chute, and the pens near the knocking box must be thoroughly cleaned before each day's operation. Pens must be kept clean and be well drained.

Adequate lighting is important so that you can properly observe the animals and perform sanitation inspection. Occasionally a light meter must be used to check the lighting. Light meters measure the amount of light in units called foot-candles. In pens and alleys where inspection is done, the plant is required to provide enough light so that the light meter reads at least 10 foot-candles when held three feet above the floor. Suspect pens and restraining devices require more light because these are places where animals are more closely examined. These areas must have a minimum of 20 foot-candles when measured three feet above the floor. A designated suspect pen must be provided. It must have a weather-tight roof to provide an area for proper inspection during inclement weather. The plant must also provide a restraining device such as a chute or squeeze gate for restraining animals and taking temperatures during an examination.

The plant must provide an adequate system for the identification of animals. Plant identification cards are commonly referred to by plant personnel as "pen cards" or "drive cards". These must be presented to the inspector before antemortem inspection is performed.

It is the responsibility of the plant to provide adequate, competent employees to move, segregate, restrain, identify and dispose of animals. Do not allow yourself to become the plant foreman in the antemortem areas. You must closely monitor plant personnel to assure that they use humane animal handling practices at all times.

If the plant has not met one or more of its responsibilities, you must take action. The action you may take will vary from withholding inspection of a single pen of animals until the pen is properly identified or to withholding inspection of all animal pens because the plant has failed to provide an employee to move and restrain the animals. Be sure to check with the veterinarian for advice on what action you should take, especially until you gain some on-the-job experience. Once you determine the plant has met all of its responsibilities, you will be ready to perform the actual antemortem inspection of animals presented for slaughter. Antemortem inspection consists of two parts:

1. Observe Animals at Rest
2. Observe Animals in Motion (from Both Sides)

It is important to inspect the animals both ways because certain abnormal signs, such as labored breathing, are easier to detect while the animals are at rest, while other abnormalities, such as lameness, may not be detected until you observe the animals in motion.

When you perform at-rest inspection, position yourself at various locations outside the pen. Observe all of the animals and note their general behavior while they're at rest. Determine if any of the animals show abnormal behavior patterns such as excessive excitability or severe depression. Look at the heads, necks, sides, rumps, and legs of as many animals as you can see. Make a note of any abnormalities.

When you perform in-motion inspection of the animals, you should position yourself outside of the pen next to the open gate so that you can easily view the animals as they are driven by you. You should direct the establishment employee to move all of the animals slowly and individually out of the pen and then back and forth, while you observe both sides of each animal for abnormalities by viewing the visible side of the head, neck, shoulder, flank, legs, and rump. If the pen size permits, you may want to position yourself inside the pen and direct the establishment employee to move the animals past you both ways in the pen. Do this only if it is safe. In general, it is only safe to position yourself inside the pen when inspecting small livestock such as sheep, market-sized hogs (up to 250 lbs.) and calves. It cannot be overemphasized to always be alert and think safety. Cattle can be surprisingly fast and agile, particularly when agitated or startled. Never go into a pen of large livestock. This is especially true of a pen with a bull or a cow with a calf. Don't make the mistake of performing in-motion inspection immediately behind a loose, swinging gate. As the animals are driven out of the pen, they could push against the swinging gate and force it against you. Also, never position yourself in a corner or in a place that allows no escape to safety should an animal turn aggressive. Don't climb on high, unstable fences to view the animals during antemortem inspection. As in all areas of the plant, wearing your safety helmet during antemortem inspection is a good safety practice.

Following antemortem inspection you must record your findings. You will use the Pen Card, the FSIS Form 6150-I (Identification Tag-Antemortem), and the FSIS Form 6200-16 (Summary of Antemortem Examination) to record your antemortem findings. The pen card is a part of the procedure used to identify animals as having received antemortem inspection. Any modification of this procedure to fit small, large, or unusual operations must be approved by the district manager. There are spaces on the pen card for the date, the pen and lot number, the species, the breed, the number of animals, the inspector's signature, and the time of the day the animals were inspected. In most instances, the plant will record the information directly on the card for you. You should, however, check to see that the information is correct.

If you apply a U.S. Condemned tag, enter the number of the tag and cross out the word "suspect". After you inspect the animals, you sign the card and write the time the animals received inspection. Signing the card indicates that the animals have received antemortem inspection and are ready for slaughter. The pen card is taken from the pen and delivered to the postmortem inspector by a plant employee prior to or at the time the animals are driven inside the establishment for slaughter. The postmortem inspector collects all of the pen cards and compares the number of animals recorded on the cards with the number of animals being slaughtered. This is done to determine if all animals being slaughtered have received antemortem inspection. Pen cards of each day's kill should be held at the establishment for one week.

If the animal or animals are to be "handled as suspect," cross out the words "condemned or" and "tag no". Then enter any back tag #'s, sales barn tag #'s, or other identifying information available.

If the animal is a TB reactor, cross out the words "condemned or suspect" and add the word "reactor" and the reactor number located on the ear tag.

Under the "kind of animal" section, terms like Hereford, Jersey, Buffalo, Santa Gertrudis, Hampshire, Yorkshire, Duroc, etc., should be used. When you are using a single 6150-1 form to identify more than one animal, be sure to indicate the number in the section "kind of animal": 3 Herefords, 2 Holsteins, etc. Also record all back tag numbers, ear tag numbers, etc., for each animal.

When you perform the antemortem inspection procedure, you observe each animal for abnormal signs. When you find an animal with abnormal signs, you must record the signs on the FSIS Form 6150-1. The form has two sections. The upper section contains most of the information that identifies the animal, such as the kind of animal, sex of the animal, and the animal's approximate weight. You will complete the upper section of the card. The lower section, the postmortem report, will be completed by the veterinarian responsible for postmortem inspection. The FSIS Form 6150-1 contains the following sections:

FSIS FORM 6150-1

Slaughter at establishment - Indicate the official establishment number where the animal is to be slaughtered.

Condemned or suspect tag - If you apply a U.S. Suspect tag, enter the number of the tag and cross out the word "condemned?'

Sex - Use terms like bull, cow, heifer, shoat, ewe, barrow, etc.

Tagged for - Indicate the condition for which you tagged the animal, (e.g., actinobacillosis, epithelioma, downer, TB reactor, pneumonia, broken leg, etc). If you

feel it is necessary to add more information, use a phrase like "see back of form" and then write the information on the back of the form.

Temperature - Indicate the temperature in degrees F. You must take the temperature of all downers, TB reactors, mastitis elimination cows, and all animals exhibiting signs of an abnormal temperature

Weight - Estimate the animal's weight in pounds.

Remarks - The veterinarian will complete the remarks section after determining the antemortem disposition and then sign and date the form. Depending on local policy; the optional postmortem report section may or may not be completed.

The FSIS Form 6200-16 (formerly MP Form 402-1) (Summary of Antemortem Examination) is used to record daily antemortem activities. This form is optional and its use is at the discretion of the circuit supervisor. The following information is entered into the numbered spaces:

1. Date of last report, this species. This refers to the last date this species was slaughtered.

2. Official establishment number assigned to this plant.

3. Today's date.

4. Name of species inspected (use a separate 6200-16 for each species inspected on this date).

5. Number of animals passed for regular slaughter (does not include suspects).

6. Number of animals that were suspected on the previous day but not slaughtered.

7. Number of animals suspected today (include both tagged and handled as suspects).

8. Total of lines 6 and 7.

9. Number of animals that were suspected but later released and not slaughtered as suspects.

10. Number of animals that died in the pens after being tagged as suspects.

11. Number of suspect animals slaughtered on this data

12. Total of lines 9, 10, and 11.

13. Number of suspect animals that are not slaughtered and are being held as suspect.

14. Number condemned on antemortem plus dead animals (do not include suspects that die in pens--they are reported on line 10.)

15. Write in "deads" or cause for condemnation and the number of animals disposed of in that category.

16. The first condemned tag number and the last condemned tag number used.

17. The signature of the inspector completing the report.

After you complete antemortem inspection and properly record the results, you will then take action based on your findings. You will allow normal animals to be released for regular slaughter (this is certified by your signature and time of antemortem inspection on the pen card).

You will direct the establishment to segregate those animals with abnormal signs into the suspect pen and notify the veterinarian of your findings, such as how many animals have been placed in the suspect pen. As you gain experience and confidence, you will use judgement to determine which abnormal animals should be placed in the suspect pen for the veterinarian's examination.

For example, a broken leg is more serious than a broken horn or a broken tail. An animal with a broken leg must be placed in the suspect pen for the veterinarian's examination whereas an animal with no abnormal signs except a broken horn or tall would not. Similarly, a deep wound is more serious than a scratch or skin abrasion. An animal with a deep wound must be placed in the suspect pen for the veterinarian to examine while an animal with a minor skin abrasion would not.

Abnormal antemortem signs can be associated with body movement and action, body position, condition, function, surfaces, discharges, and body odor. Some examples of abnormal signs associated with body movement, action and position include:

1. Lameness-sometimes the cause of lameness is rather obvious; sometimes not.

2. Stiffness and pain-lameness may be caused by arthritis in one or more joints.

3. Central Nervous System (CNS) diseases-certain diseases such as rabies and listeriosis can affect the brain and CNS. The animal may appear extremely nervous or restless, excessively anxious or upset, or stagger or circle.

4. Certain poisons and toxic residues that the animal has been exposed to may cause abnormal movement and action, such as staggering or circling.

5. Depression or disinterest may be a sign that the animal is in a dying or moribund state. A moribund animal may not respond to noises or other stimuli. Animals in a moribund condition are not eligible for slaughter.

6. It is possible that an animal that is depressed or fails to respond normally to stimuli could be under the influence of a tranquilizer. Tranquilized animals are not eligible for slaughter. Tranquilizers and other drugs have specific withdrawal periods that must elapse before the animal is eligible for slaughter.

7. An animal may be disoriented and run into things or butt its head against objects.

8. Animals may scratch excessively or rub their hide against objects. Scratching and rubbing associated with hair loss may indicate that the animal has lice or mange infestation. Scabies is a mange condition that is a reportable disease. The veterinarian must report this condition to other health agencies. These agencies may want to take skin scrapings from the animal to confirm the diagnosis.

9. Animals may have muscle tremors or shivering, hold their head to one side, or have any number of abnormal gaits.

10. Animals may strain and assume abnormal body positions. For example, urinary or intestinal disorders may cause straining and abnormal positions such as arching of the back, tucking in of the abdomen (stomach), and extending the neck and tail.

11. An animal may have difficulty in rising or be unable to get up at all. These "downers" may be down for a variety of reasons ranging from an injury to severe illness or depression. All "downers" must be examined by the veterinarian. The veterinarian may choose to examine these animals where they are rather that move them to the suspect pen to avoid unnecessary handling and pain or injury to the animal.

You will also see animals with signs associated with abnormal body condition. Examples of abnormal body condition include:

1. Animals that are extremely thin and weak - you may see animals that are thin and weak due to chronic disease problems such as pericarditis, pneumonia, nephritis, etc. Animals that are in very poor condition and exhibit other signs such as depression, lethargy, respiratory difficulty, etc., should be placed in the suspect pen. Remember, though, that animals can be normally thin. So thinness alone may not be an abnormal sign. For example, some old cows may be very thin, but they may be bright and alert, have a good appetite, and show no other abnormal signs. They should not be placed in the suspect pen.

2. Calves (especially when very young) may be weak, thin, and dehydrated. They may be uncoordinated or barely able to stand. They should be placed in the suspect pen.

Abnormal signs associated with body functions include respiratory distress such as labored or rapid breathing. These signs are commonly seen in animals with lung disorders such as pneumonia. Coughing and sneezing are other signs associated with pneumonia and other respiratory disorders.

You may occasionally see animals in the act of parturition, that is, giving birth to young. The regulations prohibit the slaughter of these animals for human food until after they have given birth and passed the placenta (afterbirth). A cow with mastitis may have a hot, hard, swollen, and tender udder. Milk secretion may have partially or entirely stopped. A loss of appetite may be present. In advanced cases, the udder may become hardened throughout.

Animals may exhibit pain. Pain may be manifested by signs such as groaning, grunting, or grinding of teeth. You may also see animals that have difficulty drinking and swallowing or appear to be blind. All of these signs are abnormal and may be associated with a great variety of diseases.

It is not uncommon during antemortem inspection to observe an animal with an eye missing. Any bovine with an eye missing must be handled as a suspect. Be sure to place this animal in the suspect pen for the veterinarian to examine. These animals are suspects for epithelioma (cancer eye).

This chart shows the range of normal body temperatures, as well as the condemnation temperatures, for the various species. The regulations specifically state a certain temperature at which the veterinarian must condemn the animal. This chart is given as a reference only; don't try to memorize it.

Normal Animal Temperature Ranges				
	Cattle	Swine	Sheep	Horses
Maximum	102.5	104.0	104.0	100.5
Average	101.5	102.5	102.5	100.0
Minimum	100.0	100.5	102.0	99.0
Veterinarian Condemns on Antemortem if:				
	105.0	106.0	105.0	105.0

There are a great number of abnormal signs associated with body surfaces. Injuries and fractures are included in this group. When observing animals be on the alert for abnormal growths, swelling, and enlargements such as hernias. Two common conditions you may see are actinomycosis and epithelioma. Actinomycosis (commonly called "acti" or "lumpyjaw") involves the bony structures of the head, particularly the lower jaw (mandible). Epithelioma (commonly referred to as "cancer eye" or "bug eye") is a neoplastic growth involving the eye, eyelids, and the orbital region. The tumor appears to originate in either the cornea, third eyelid, or the eyelids. Herefords are by far the breed most commonly affected.

Abnormalities of the skin and mucus membranes will be observed while performing antemortem inspection. Animals may exhibit a variety of skin lesions including papillomas (warts). They may have a roughened, dry, or dehydrated hair coat or large patches of hair missing. Be on the lookout for superficial ulcers, sores, blisters or vesicles, particularly around the feet or around the mouth. There are several diseases that may cause these signs, including the dreaded foot-and-mouth disease, which is a reportable disease. If lesions are infested with maggots, notify the veterinarian because he or she will have to collect samples and send them to the laboratory. The laboratory will examine the maggots to see if they are screwworm larvae. Allied government animal health agencies have been trying for years to control the incidence and spread of screwworm infestations in this country.

The color of exposed membranes of the body, such as the gums or the eyes, may be an indication of a disease condition. The membranes may appear reddened, or very pale, or may have a yellowish color to them.

While observing body surfaces, be on the lookout for injection sites. Abnormal swelling, especially in the round or neck areas, could be an indication that animal was recently given an injection. Approved drugs have a very specific withdrawal period prior to slaughter that, if not followed, can result in potentially harmful residues in the muscle tissue. If you observe an injection site on an animal, you must make it a suspect so that the veterinarian can perform tests to determine if residues are present in the tissues.

Animals may also show signs of abnormal body discharges or abnormal odors. Abnormal discharges can include excessive salivation, diarrhea, blood, and pus. In a broad sense, animals with a retained placenta (afterbirth) can be included in this group. Be sure that animals with a retained placenta are placed in the suspect pen as the regulations prohibit the slaughtering of such animals until all the membranes have been passed.

Along with a thorough visual examination of animals, your sense of smell is a very important aspect of performing antemortem inspection. For example, an animal may have a prolapsed rectum or uterus that has become infected and results in a strong, foul odor. At times when looking at a large pen of animals you may not at first see a wound

or prolapse, but you may detect the characteristic odor that will alert you to look more closely at the animals. An epithelioma of the eye that has become infected is another example of an abnormality that may be associated with a very characteristic foul odor.

When the veterinarian examines the animal with abnormal signs that you had placed in the suspect pen, he or she may examine the animal and decide that it is normal or that the abnormal signs you observed are not severe enough to have the animal suspected or condemned. This animal may be released for regular slaughter. If the plant employee moves this animal out of the suspect pen and into a different pen, be sure to make the necessary changes on the pen card.

When the veterinarian examines the animal with the abnormal signs and tells you it is a suspect, you must direct the plant employee to place a U.S. Suspect tag in the animal's ear. This identifies the animal as a suspect. It is your responsibility to make sure that the suspect is sent to slaughter at the proper time. The veterinarian will determine when this is to occur.

If you are assigned to work at a swine slaughtering plant that uses a mechanical dehairing machine, you must see that the plant further identifies the suspect hog by tattooing a number on the animal. The tattoo is very important because suspect tags are sometimes torn off when the dehairing machine removes the hair from the slaughtered hog. The tattoo then becomes the only way to identify the animal on postmortem.

All U.S. Suspects must be identified on the FSIS Form 6150-1 (Identification Tag-Antemortem). You must cross out the word "Condemned" and record the U.S. Suspect tag number in the space provided. If there is a tattoo number, record it on the form also. The veterinarian will enter his or her examination findings, including the tentative diagnosis, in the "Tagged For" space. The veterinarian will then write any additional abnormal signs in the remarks section, sign and date the form, and give it to the postmortem veterinarian.

While the suspected animal is in the pen awaiting slaughter, you have other responsibilities. You must make sure the information written on the pen card is correct. Periodically, you must observe the suspects to note if any die prior to slaughter. If a suspect dies before it can be slaughtered, you must do the following four things:

1. Tell the plant employee to remove the suspect tag from the ear and replace it with a U.S. Condemned tag. If the animal has a TB reactor tag in its ear, do not have it removed.

2. Make the necessary changes on the FSIS Form 6150-1. In the first space on the form, mark through the word "Slaughter" and in the second space cross out the word "Suspect" and the suspect tag number. In the second space, write in the word "Condemned" and the number of the tag put in the animal's ear. Complete the form

by writing in the words "Suspect Died In Pens" in the space marked "Tagged For" and place your initials and date in this same space.

3. Make the necessary changes on the pen card. The pen card is used to identify the number of animals from the pen that will be going to slaughter. Since the dead animals, naturally, won't be going to slaughter, you will have to subtract that dead animal from the total number of animals originally written on the card.

4. Notify the veterinarian. He or she may want to look at the dead animal before the plant disposes of it.

When the veterinarian examines animals with epithelioma or acti (actinomycosis or actinobacillosis) lesions, he or she will decide if the lesions are large enough to be readily seen during postmortem inspection. If the lesions are large enough, you will handle the animals as suspect but you will not have to individually tag the animals (Reg. 309.18). It is not required that you make out a separate FSIS Form 6150-1 for each animal with an obvious lesion. Instead, one FSIS Form 6150-I may be filled out for the entire group; that is, one form for those animals with epithelioma lesions and another form for those with acti lesions. To help maintain the identity of these untagged suspects, the veterinarian will have them placed in segregated lots so that they may be slaughtered together as a group.

After examining an animal in the suspect pen, the veterinarian may decide to condemn the animal. A condemned animal is not eligible for slaughter because it may have certain diseases or abnormalities that make it unfit for human food. It is your responsibility to identify the animal so that it is neither slaughtered nor used for human food. This is accomplished by having the plant place a U. S. Condemned tag in the animal's ear. The FSIS Form 6150-1 must also be completed. The word "Suspect" is crossed out and the number of the U. S. Condemned tag that was placed in the animal's ear is written in the space provided on the form.

Since the plant cannot slaughter a condemned animal nor use it for human food, the plant usually promptly kills the animal and immediately disposes of the carcass in one of two ways. Many plants have their own disposal equipment and facilities. When a carcass is disposed of in this way, it is termed "on-premises rendering." Plants that do not have their own disposal equipment and facilities have the carcass sent to some other place. This is called "off-premises disposal." Regardless of the plant's method of disposal, inspection personnel have certain responsibilities. These responsibilities are detailed in the self-instructional guide "Identification, Control, and Destruction of Condemned Meat Materials". Refer to this guide when your job assignment requires you to oversee the disposal of a condemned animal.

There may be occasions when the plant requests and receives permission to hold an animal for treatment in an effort to improve the animal's condition to the point that it may become eligible for slaughter. This "on-premises treatment" is a relatively rare

occurrence, but, if it does occur, you have certain responsibilities. Since this is an animal condemned for regular slaughter, you must assure that its identity is maintained throughout the treatment period. The animal must be placed in a separate pen identified with a pen card. In addition, the FSIS Form 6150-1 must be changed. Cross out the word "Slaughter" and write in the phrase "Held for Treatment" in the appropriate space. Following the treatment, the veterinarian will examine the animal and direct you as to what action to take.

Another possibility is that the plant may request and receive permission to have an animal treated off-premises, such as at a local veterinarian clinic. These animals must also be kept in an identified pen until they are picked up for treatment. The veterinarian will tell you to have the condemned tag removed just before the animal is shipped. The condemned tag can be removed because a different type of identification system will be used to identify the animal after it leaves the plant premises. This ID system will be set up by livestock health officials; and you, the food inspector, will not be responsible for it.

An animal condemned for a reportable disease may also be held at the establishment rather than being destroyed and disposed of immediately. A reportable disease is either highly contagious to other animals or it is a disease that we are trying to eradicate from this country. If the veterinarian suspects that an animal has a disease in this category, he or she must immediately report it to animal health agencies such as Veterinary Services. In most cases, Veterinary Services will want the animal held so they can examine it. Reportable diseases include anthrax, blue-tongue, hog cholera, foot-and-mouth disease, rinderpest, and scabies. Some of these diseases are rarely seen in this country but you and the veterinarian must, nonetheless, be on the lookout for them. The veterinarian will first identify the animal with a reportable disease as condemned and then have the animal placed in a separate pen identified with a pen card. The establishment employees will be notified that the animal is not to be removed from the pen for any reason without the permission of the veterinarian or some other animal health official.

The majority of animals shipped to a packing plant for slaughter are in good health. Some, however, may be sick or injured and die en route to the packing plant. Others may die in the pens after they reach the plant. Obviously, a dead animal may not be used for human food. When you observe an animal that arrives at the plant dead or subsequently dies in a pen, you must make sure that there is an adequate control to prevent the animal from entering the food supply. You must take the following steps:

1. Identify the animal as condemned with a red U.S. Suspect tag.

2. Fill out an FSIS Form 6150-1 and write the words "Dead in Pens" or "Dead on Arrival" in the "Tagged For" space.

3. Have the animal properly disposed of. (Follow the steps in the guide "Identification, Control, and Destruction of Condemned Meat Material.")

4. Notify the veterinarian.

There are many other times during the day when you should notify the veterinarian. This is particularly true when you are new on the job and are unsure of what action you should take. Times when you should notify the veterinarian include:

1. When you place an animal in the suspect pen. The veterinarian may tell you to take its temperature and record it, along with the abnormal signs you observed, on the FSIS Form 6150-1. Make sure you give the veterinarian the FSIS Form 6150-1 and any other information regarding the animal when he or she comes to look at the animal.

2. Whenever you believe animals on antemortem are being treated inhumanely, specific actions you should take are contained in the Humane Slaughter module.

3. If the plant does not provide adequate help to move or restrain animals, does not provide adequate lighting for you to inspect the animals, or fails to keep the antemortem areas clean.

There are two types of animals specially identified before being sent to slaughter that you need to be familiar with: TB reactors (tuberculin reactors) and brucellosis reactors. These animals may show no abnormal signs; however, they still require your special attention.

A TB reactor is an animal that has reacted to a test for tuberculosis. Tuberculosis is an ancient disease that we have been trying to eradicate from this country for a long time. When an animal is identified as a TB reactor, it is branded with a "T" brand on the left hip and a TB reactor tag is placed in its left ear before being sent to a packing plant for slaughter.

When a TB reactor arrives at the plant, it is handled differently during antemortem inspection. You must always have it placed in the suspect pen and notify the veterinarian even if it appears to be normal. This is because the veterinarian must examine a TB reactor for signs of TB, as well as other diseases. If the veterinarian condemns a TB reactor on antemortem, he or she must have the animal removed to an inedible department where a detailed postmortem examination is performed. The veterinarian is required to do this for live TB reactors condemned on antemortem, as well as those reactors that have died; either en route to the plant or in the pens.

A TB reactor is further identified by a form that serves as a permit for the movement of the animal. A copy of the form is mailed in advance to the veterinarian at the plant where the animal is to be slaughtered and a copy of the form accompanies the animal during shipment.

The other type of specially identified animal mentioned above is a brucellosis reactor. Brucellosis (Bang's disease) is another disease that we have been attempting to eradicate from this country for a long time. The identification of these animals is similar to tuberculosis reactors. Animals that react to a brucellosis or Bang's test must be identified and sent to slaughter. A Bang's reactor tag is placed in the animal's left ear and a "B" is branded on the left hip. A shipping permit form is completed and sent along with the Bang's reactor to the slaughter plant.

Despite the similarities in how TB and brucellosis reactors are identified, there are significant differences in how the two are handled once they arrive at the plant. As was mentioned earlier, TB reactors condemned on antemortem, or that have died, must have a complete postmortem examination performed by the veterinarian in an inedible area. This is not the case with a condemned Bang's reactor. A dead Bang's reactor is handled the same as a normal animal. There are two other major differences in how TB and Bang's reactors are handled. First, a TB reactor must be placed in the suspect pen because the veterinarian will want to examine it and have its temperature taken. A Bang's reactor is handled the same as a normal animal. (EXCEPTION: Brucellosis reactor goats must not be slaughtered in an official establishment. They must be condemned on antemortem.) Secondly, an FSIS Form 6150-1 must be completed for a TB reactor, but it is not necessary to complete the form for a Bang's reactor unless it has abnormal signs. Incidentally; even though a TB reactor is placed in the suspect pen and handled as such, it is not necessary to have a suspect tag placed in its ear because the reactor tag will identity it. When you complete the FSIS Form 6150-1 you will write in the reactor tag number.

On occasion, a TB reactor or Bang's reactor may be shipped to slaughter without being properly identified. Be sure to notify the veterinarian if this occurs because he or she will have to complete and distribute a VS Form 1-68 (Report of Brucellosis and Tuberculosis Reactors Slaughtered That Are Not Properly Identified When Received).

In addition to TB and Bang's reactors, there are other specially identified animals that you may occasionally see during antemortem inspection. They include those animals that reacted to the test for the diseases leptospirosis or anaplasmosis. Also, in the broad interpretation of the classification, we might include research and investigational animals and other animals that are sent to slaughter for a specific reason and are specially identified. The handling of these animals is discussed in greater detail in the regulations. Remember that you are to notify the veterinarian when you see a specially identified animal.

It's impractical to cover every aspect of antemortem inspection in this script, however, there are some items that deserve mention, if only briefly. For a more detailed description of the following topics, refer to other scripts, the Regulations, FSIS Directives, etc.

The plant to which you are assigned may be using the alternative method of antemortem inspection. Approval for this method is granted by the district manager. In this method of inspection, a plant employee rather than the food inspector first examines the animals and segregates those that he or she thinks have abnormal signs. The employee places those animals with abnormal signs in the suspect pen. Then you, the food inspector, check the establishment's work in the following manner. You perform at-rest inspection on all of the animals the plant employee considered normal and on all of the animals the plant employee put in the suspect pen but you do not perform in-motion inspection on all of the animals classified as normal. Instead you select 5 to 10% of the normal animals and perform in-motion inspection on them. When you select the 5 to 10%, try to select animals from several lots. After you inspect the normal animals, if you find that the plant employee is not recognizing abnormal signs and not segregating the animals as necessary, tell the veterinarian. He or she will take any necessary action.

Delayed slaughter is covered in greater detail in the regulations. Basically, delayed slaughter is a method of inspection that allows certain low volume plants, with prior approval of the circuit supervisor, to have antemortem inspection done the afternoon of the day before the animals are slaughtered. For example, a low-volume plant may be going to slaughter two cows on Friday morning at a time you'll be carrying on your inspection duties some place else. If the plant is approved for delayed slaughter, it is permissible for you to perform antemortem inspection late Thursday afternoon when you are at the plant. As you might expect, there are restrictions and limitations governing delayed slaughter. Be sure to read what they are if you are asked to perform antemortem inspection in this way.

Special provisions have been made to allow the emergency slaughter of seriously injured animals during other than normal inspection time. As an example, let's say that on a Sunday a cattle truck headed for a slaughtering establishment overturns and several of the animals are seriously injured. Because of this, the establishment wants to slaughter the animals immediately rather than have them suffer pain until slaughtering operations begin on Monday morning. The establishment must try to contact FSIS personnel and explain the situation so that an inspector can perform inspection. If the establishment is unable to contact FSIS personnel, the emergency slaughter provision allows it to slaughter the animals without antemortem inspection provided the carcass and all parts, including the viscera, are saved for postmortem inspection. One very important thing to remember about emergency slaughter: It is NOT intended to cover the slaughter of sick or dying animals, only those that are seriously injured. So animals that are sick or dying from a disease are not covered by emergency slaughter.

Chemicals such as insecticides, rodenticides, cleaning compounds, etc., used in and around the antemortem area must be safe for use in this area. Details on the use of insecticides and rodenticides in the antemortem area can be found in the Sanitation module.

You may work at a plant that injects a solution containing proteolytic enzymes into the jugular vein of cattle. The enzyme solution makes the meat derived from the animal more tender. Only normal cattle are eligible for injection. The plant must slaughter the animal between 2 and 30 minutes after injection. Any animal showing a reaction (such as salivation, incoordination, etc.) to the injection must be examined by the veterinarian.

Proteolytic enzymes do not leave a toxic residue in the meat. There are, however, a great number of drugs and other substances that an animal may be treated with, or exposed to, that may leave residues. These substances include hormones, antibiotics, tranquilizers, organic or inorganic compounds, anthelmintics, and pesticides. As was mentioned earlier, be on the lookout for injection sites and abnormal signs that indicate an animal has been treated with, or exposed to, any of these substances.

Module 9
Antemortem Inspection

Supplement

Resources:

1. Regulations
2. Manual
3. Employee Development Guide
4. Guideline #6 "Glossary of Meat and Poultry Industry Terms"

Put your answers in the space provided.

1. According to the regulations, the antemortem inspection is required to temperature which of the following animals on antemortem?

_____ An animal unable to get up or move

_____ Brucellosis reactor animals

_____ Tuberculosis reactor animals

_____ Mastitis elimination animals or mastitis suspect animals. Any animal exhibiting signs of abnormal temperature

2. Which of the following are supposed to identify a TB reactor?

_____ A "B" brand on left hip

_____ A "T" brand on left hip

_____ A reactor tag in the left ear

_____ A suspect tag in the left ear

_____ A VS 1-27 form

_____ A VS 6-35 form

3. Explain the difference between "tagged as a suspect" and "handled as a suspect."

4. Which abnormal conditions must be reported to Veterinary Services?

_____ Foot-and-Mouth disease

_____ Pneumonia

_____ Actinobacillosis (lumpy jaw)

_____ Anthrax

5. State the body temperature at which each of the following species must be condemned.

Cattle _____ Sheep _____ Swine _____

6. The plant disposes of dead or condemned red meat carcasses by sending them to a rendering plant away from the official premises. FSIS requires these carcasses be properly denatured. From the following list of denaturants, identify those denaturants that are approved for this purpose.

_____ Crude carbolic acid

_____ Kerosene

_____ Charcoal

_____ Cresylic disinfectant

_____ A formula consisting of 1 part FD&C green #3 coloring, 40 parts water, 40 parts liquid detergent, and 40 parts oil of citronella

7. Which tag should be used to tag an animal affected with either epithelioma, actinobacillosis, or actinomycosis to such an extent that the lesions would not be readily detected on postmortem.

   _____ Silver U. S. Suspect tag

   _____ Red U. S. Condemned tag

   _____ A tag is **not** necessary

8. Which tag should be used to tag an animal affected with either epithelioma, actinobacillosis, or actinomycosis to such an extent that the lesions would be readily detected on postmortem?

   _____ Silver U. S. Suspect tag

   _____ Red U. S. Condemned tag.

   _____ A tag is **not** necessary

9. Which tag should be used for tagging an animal found dead in the pens?

   _____ Silver U. S. Suspect tag

   _____ Red U. S. Condemned tag

   _____ A tag is **not** necessary

10. Cattle that are washed on antemortem must be

    _____Dry or dry enough to prevent dripping when stunning occurs.

    _____Condemned because there is a restriction on washing cattle prior to slaughter.

    _____Withheld from slaughter for a least 2 hours.

    _____Sampled for detergent residues.

Use Guideline #6 to identify the correct definition for the following:

11. Barrow

_____ A castrated male swine

_____ A young female swine

12. Boar

_____ A mature female swine

_____ An uncastrated male swine

13. Bull

_____ An uncastrated mature male bovine

_____ An uncastrated male calf

14. Calf

_____ A young deer

_____ A young bovine of either sex that has not reached puberty - commonly up to nine months of age

15. Cow

_____ A mature female bovine animal

_____ A female bovine that has given birth to one or more calves

16. Ewe

_____ An adult female sheep

_____ An adult female goat

17. Heifer

_____ A female bovine that has not yet produced a calf

_____ A young bovine animal of either sex

18. Lamb

_____ A young sheep usually less than 1 year old or without permanent teeth-can be either sex

_____ A young goat of either sex-less that 1 year old or without permanent teeth

19. Ram

_____ A large male sheep

_____ A mature uncastrated male sheep

20. Shoat

_____ A young sheep of either sex that is able to feed without nursing

_____ A young pig of either sex that is able to feed without nursing

21. Stag

_____ A castrated mature animal that displays normal male sex characteristics (and odors) having been castrated after reaching sexual maturity

_____ A fully mature rooster that has been used for breeding

_____ Either of the above

22. Steer

_____ A mature bovine that was castrated *before* reaching sexual maturity

_____ A bovine animal that weighs at least 1200 pounds

23. Wether

_____ A mature swine which as been castrated before reaching sexual maturity

_____ A male sheep which has been castrated before reaching sexual maturity

Identify the correct description for the following.

24. Downer

_____ An animal unable to rise and walk

_____ An animal showing signs of an abnormal condition

_____ An animal found dead in the pens

25. U.S. Suspect

_____ An animal that is obviously sick

_____ An animal that will not respond to stimuli

_____ An animal identified with a U.S. Suspect tag in its ear or one that has been segregated into the U.S. Suspect pen because of an abnormal condition

26. U.S. Suspect tag

_____ "U.S. Rejected."

_____ A serially numbered metal tag bearing the term "U.S. Suspect" and is silver in color

27. U.S. Condemned tag

_____ A serially numbered metal ear tag bearing the term "U.S. Condemned"- usually red in color

_____ The paper tag used to identify equipment or product as "U.S. Retained" or "U.S. Rejected"

28. Tuberculosis reactor

_____ An animal showing symptoms of tuberculosis

_____ An animal that has reacted to a tuberculin test and is tagged with an official USDA Reactor tag or similar State Reactor tag

29. Brucellosis reactor

_____An animal that has reacted to a brucellosis test and has been tagged with an official USDA Reactor tag or similar State Reactor tag

_____ An animal that exhibits the symptoms of brucellosis

30. Emergency slaughter

_____The humane slaughter of an animal which has become sick or is in a dying state during the time an inspector is *not* on duty or *not* available for inspection

_____The humane slaughter of an animal which is or was injured at night, on a holiday, or during a weekend, and an inspector is *not* on duty or *not* available for inspection

31. Investigational animal

_____Livestock used in any research investigation involving an experimental biological product, drug, or chemical

_____An animal that is found in a herd as a result of Veterinary Services investigation

32. Proteolytic enzyme

_____ A chemical used to treat an animal suffering from protein deficiency

_____An agent that is injected into the animal's blood system, or applied to the muscle of any animal for the purpose of softening the muscle, or causing the muscle to be more tender

33. Swine suspects destined to have the hair removed by a dehairing machine require further identification other than the suspect tag. Name one method used for further identification.

34. From the following list of facilities and equipment, select those that the official establishment should provide.

_____Restraining device in suspect pen (or other acceptable method)

_____ Covered suspect pen

_____20 foot-candles lighting in suspect pen. Adequate personnel to handle and drive livestock

_____Suspect and condemned tags

_____ An accurate thermometer for inspection use

_____Curbs at least 12" high around the antemortem pens. Drinking water for livestock in each pen

_____ At least once per day, clean up of all pens

_____ A method to attach pen cards to pens

35. Describe a circumstance that would allow the plant to slaughter an animal without it receiving antemortem inspection.

36. Use the following information to complete the pen card below:

    You just performed antemortem inspection on 24 animals (13 Holstein cows, 5 Angus steers, and 6 Hereford heifers) in pen #16. They are in Lot #39. One of the 13 cows had a vaginal prolapse, therefore, you made her a U. S. Suspect.

PEN CARD

DATE _____ **PEN#**_____

SPECIES:_____ **LOT** _____

BREED:_____

NUMBER:_____

TIME_____**SIGNATURE**_____

37. What happens to the above pen card when the animals are sent to slaughter?

38. Complete the FSIS Form 6150-1 using the following information:

You performed antemortem inspection on this date at Est. 38. The veterinarian condemned one Hereford bull (back tag #999 and condemn tag #456) for epithelioma.

U.S. DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
MEAT AND POULTRY INSPECTION OPERATIONS

IDENTIFICATION TAG-ANTEMORTEM

SLAUGHTER AT EST. NO.

CONDEMNED OR SUSPECT TAG NO.

KIND OF ANIMAL	SEX

TAGGED FOR

TEMPERATURE	WEIGHT

REMARKS

INSPECTOR	DATE

POST MORTEM REPORT

FINDINGS

DISPOSAL

INSPECTOR	DATE

FSIS FORM 6150-1
(9/99)

REPLACES MP 402-2
9/83 WHICH MAY BE
USED UNTIL EXHAUSTED

39. Complete the FSIS Form 6150-1 using the following information:

You performed antemortem inspection on this date at Est. 38. You detected three Hereford cows with actinobacillosis to the extent that this condition would be readily detected on postmortem. Back tag #333 was attached to one animal, #334 to another animal, and #335 to the remaining animal.

U.S. DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
MEAT AND POULTRY INSPECTION OPERATIONS

IDENTIFICATION TAG-ANTEMORTEM

SLAUGHTER AT EST. NO.

CONDEMNED OR SUSPECT TAG NO.

KIND OF ANIMAL	SEX

TAGGED FOR

TEMPERATURE	WEIGHT

REMARKS

INSPECTOR	DATE

POST MORTEM REPORT

FINDINGS

DISPOSAL

INSPECTOR	DATE

FSIS FORM 6150-1
(9/99)

REPLACES MP 402-2
9/83 WHICH MAY BE
USED UNTIL EXHAUSTED

40. Complete the FSIS Form 6150-1 using the following information:

You performed antemortem inspection on this date at Est. 38. You found one Holstein cow TB reactor with back tag #336, reactor tag #337, and a 103 degree temperature.

U.S. DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
MEAT AND POULTRY INSPECTION OPERATIONS

IDENTIFICATION TAG-ANTEMORTEM

SLAUGHTER AT EST. NO.

CONDEMNED OR SUSPECT TAG NO.

KIND OF ANIMAL	SEX

TAGGED FOR

TEMPERATURE	WEIGHT

REMARKS

INSPECTOR	DATE

POST MORTEM REPORT

FINDINGS

DISPOSAL

INSPECTOR	DATE

FSIS FORM 6150-1
(9/99)

REPLACES MP 402-2
9/83 WHICH MAY BE
USED UNTIL EXHAUSTED